DEPARTMENT OF THE NAVY
COMMANDER
NAVY REGION HAWAII
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COMNAVREGHIINST 11260.1B
N4
25 Jan 11

COMNAVREG HAWAII INSTRUCTION 11260.1B

Subj: MANAGEMENT OF WEIGHT HANDLING EQUIPMENT (WHE) PROGRAM

Ref: (a) NAVFAC P-307, Management of Weight Handling Equipment, Dec 09
(b) NAVFACINST 11230.1E

Encl: (1) Investigation and Reporting of Crane and Rigging Gear Accidents and Near Misses
(2) WHE Lockout/Tag-Out Procedures & Record Sheet
(3) Procedures for Reporting Deficiencies on Category 3 Cranes
(4) Procedures for Bypassing Safety Devices on Cranes
(5) Operating Procedures for Crane Lifts of Undetermined Weight and Complex Lifts
(6) Procedures for Adverse Operating Conditions
(7) Contractor Crane Support

1. Purpose. To implement region wide procedures for managing WHE programs and to assign clear responsibilities for completing WHE functions as prescribed by reference (a). This instruction is not intended to be used as a reference for proper principles or practices of crane operation or rigging. Supervisors shall ensure that anyone associated with the WHE programs receives a copy of this instruction with its enclosures.

2. Cancellation. COMNAVREGHIINST 11260.1A

3. Background. Reference (a) requires the implementation of local procedures for the management of WHE. This instruction is provided to identify proper practices and procedures and to provide guidelines for the management of WHE as delineated in reference (a).

a. Activities of this region conduct lifts of light to medium weight on a routine basis. Safe conduct of these operations is of paramount importance. In addition, proper maintenance of this equipment is essential to the continued operational availability of these high cost assets.

b. References (a) and (b) provide requirements for training and the management, training operations, testing, and certification of cranes, trackage, and rigging.

4. Scope. This instruction applies to all WHE operated at the activities of Commander, Navy Region Hawaii (CNRH). It includes government and contractor equipment as well as government and contractor operators.

5. Policy. CNRH WHE must be managed in accordance with this instruction and its references.

6. Definitions

a. WHE: Includes any crane or hoist that meets the definitions and capacities of Category 1 through Category 4 cranes, also multi-purpose aachines, MHE (Forklifts), and construction equipment when used as cranes to lift suspended loads and all rigging gear, as set forth in Section 1 of reference (a).

b. Rigging Gear: Equipment used in crane and rigging operations, per Section 14 of reference (a).

c. Load Bearing Parts and Load Controlling Parts: Those parts which support or control WHE as stated in Section 1 of reference (a).

d. Operational Safety Devices and General Safety Devices are referenced in Section 1 of reference (a).

e. Crane Trackage. Ground level and elevated crane trackage applies to tracks that supports or suspends all weight handling equipment as described in Section 1 of reference (b).

7. Action. Concern for the safety, including WHE safety training, of employees and others cannot be separated from planning, management, and operations. All personnel with WHE responsibilities must be thoroughly familiar and comply with

references (a) and (b), this instruction, and the guidance provided in enclosures (1) through (7). Primary responsibility for safety and WHE training rests with the Commanding Officer of the personnel planning, managing, and operating the equipment.

Commanding Officers may delegate the administration of the WHE program to others within their command.

a. Activity Commanding Officer/Officer in Charge shall designate in writing the activity WHE Program Manager, IAW Section 3 of reference (a).

b. WHE Program Manager (designated by Activity Commander) shall:

(1) Ensure compliance with this instruction and references (a) and (b).

(2) Ensure operators and riggers as well as personnel involved in maintenance, inspection, and testing of WHE are technically competent to perform their assigned duties.

(3) Ensure all operators are properly trained and licensed as required by the WHE licensing authority for CNRH. Maintain a list of all trained and/or licensed operators.

(4) Ensure that all work center supervisors maintain an accurate inventory of all rigging gear, to include newly purchased rigging gear. All rigging gear must be certified and inspected prior to use.

(5) Coordinate responses to all WHE audit findings for his/her activity and ensure that Program Management findings and corrective actions from the Audit of Management of WHE are closed and/or implemented.

(6) Upon notification of an accident or incident concerning WHE under their activity's cognizance, conduct an immediate investigation into the circumstances in accordance with enclosure (1). If the WHE is activity owned, prepare the report. If owned by another activity, prepare the report and offer assistance as the subject matter expert in the investigation. Report the preparation of the WHE accident or incidents to the owner of the equipment.

(7) Coordinate responses and track the completion and/or implementation of NAVCRANECEN Crane Safety Advisories (CSA) and Equipment Deficiency Memoranda (EDM). Any necessary responses to a CSA/EDM shall be provided to NAVCRANECEN within 30 Days of

the CSA/EDM. Proper records shall be maintained and shall include:

(a) A copy of each CSA/EDM that pertains to the activities crane inventory.

(b) Verification of the applicability of the CSA/EDM to the site.

(c) Final verification that CSA/EDM was implemented and any supporting documentation, and copies of any responses provided to NAVCRANECEN.

(8) Provide an accurate WHE and crane trackage inventory to the designated Certifying Official. An updated inventory list must be provided annually and whenever additions or deletions are made to the activity inventory.

(9) Ensure that Operator Daily Check Lists (ODCLs) are being used and that completed ODCLs are being forwarded to the Test Director for record keeping.

c. Certifying Official (designated by Activity Commanders) shall comply with this instruction and Section 2 and 3 of references (a) and (b).

d. Test Director (designated by Certifying Official) shall be designated IAW Section 3 of reference (a).

e. WHE Inspector (OPC731) shall in collaboration with the Test Director, manage and coordinate all inspections, maintenance, and repair efforts to be performed on all WHE and crane trackage under CNRH activities' cognizance IAW Section 3 of reference (a).

f. Engineering (FEC HI) Code CI5 shall:

(1) Provide engineering support to the WHE Program as needed. This support shall be provided on a case-by-case basis. The Certifying Official and the Test Director will determine the type and extent of support. Types of support include: determination of the capacity of crane and hoist supports, i.e., rails, posts, pad eyes, etc., providing plans and structural

analysis for alterations to load bearing and load controlling components on WHE, determination of brake tolerances, air gap analysis, and corrosion analysis.

(2) Ensure all projects that are prepared by engineering that may use contractor owned and/or operated WHE include a statement or paragraph that ensures compliance with guidance set forth by reference (a) and enclosure (7).

g. Activity Safety Office and Regional Safety Department shall:

(1) Coordinate the physical qualification examination and a language ability assessment for operators.

(2) Ensure compliance with enclosure (1) that addresses how WHE users will report accidents/incidents to the Safety Department and how investigation action items will be tracked to completion.

(3) Review and audit the implementation and use of the crane Lockout/Tag-Out Program in accordance with enclosure (2).

(4) Provide a representative as requested by the Crane Certifying Official or Test Director to participate in crane and rigging gear accident investigations.

h. Activity Work Center Supervisors that Utilize Category 1 through Category 4 Cranes shall:

(1) Be responsible for all crane and rigging operations performed using WHE and rigging gear assigned to their work centers. Supervisors will facilitate annual refresher safety training in pre-use inspections, basic rigging, and equipment operations.

(2) Ensure safe crane and rigging practices are being used and correct any deficiencies noted by the Certifying Official or his representative.

(3) Review daily, the operator's daily checklists for Categories 1, 2, cab operated 3, and Category 4 Cranes and monthly checklists for gantry, wall and bridge type Category 3 cranes for accuracy. Forward the checklists to the Test

Director, annotating any minor or major deficiencies discovered. Immediately notify the Test Director or Certifying Official if a major deficiency is discovered. The crane shall be immediately secured upon identification of a major deficiency.

(4) Ensure all Categories 1, 2, cab operated 3, and Category 4 Crane operators have valid licenses for the individual cranes being operated.

(5) Ensure all operators have adequate knowledge of the areas identified in Section 10 of reference (a) including demonstration of operation of each specific type of equipment, although licensing is not required for Category 3 (non-cab operated) cranes. Category 3 (non-cab operated) Crane shall re-take the Category 3 Crane Safety Course every three years.

(6) Ensure all personnel operating Category 3 Cranes or performing rigging tasks are properly trained for the tasks they are performing in accordance with reference (a), and are properly performing pre-use inspections of rigging gear in accordance with Section 14 of reference (a). If an operator detects a deficiency that is determined to be a Load-Bearing, Load-Controlling, or Operational Safety Devices deficiency, immediately secure the crane and notify the WHE Inspector in accordance with enclosure (3).

(7) If an accident occurs, notify the Test Director or Certifying Official and the Activity and/or Regional Safety Department immediately so that appropriate action may be taken per enclosure (1).

(8) Ensure all new rigging gear has appropriate certification paperwork and are maintained IAW Section 14 of reference (a).

i. Operators of Categories 1, 2, 3 and 4 Cranes shall comply with regulation in Sections 6, 7, 9, & 10 of reference (a).

j. Crane Licensing Authority (Pearl Harbor Naval Shipyard) shall:

(1) Establish and maintain licensing procedures for crane operators (Category 1, 2, cab operated 3, and Category 4 Cranes) per reference (a). This license shall be specifically

for crane operations only and is not intended as a license for other heavy equipment operations.

(2) Maintain accurate License Record Files for all operators in accordance with reference (a).

k. Contracting Officers shall ensure compliance with enclosure (7).

M. E. LEE
Chief of Staff

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INVESTIGATION AND REPORTING OF CRANE AND RIGGING GEAR ACCIDENTS AND NEAR MISSES

1. General. In addition to the investigation and reporting requirements of OPNAVINST 5102.1 and 5100.23, activities shall investigate and report WHE accidents, as defined below, in accordance with this section. The term "accident" is synonymous with "mishap" as used in the OPNAVINSTs.

2. Definitions. All crane and rigging gear accidents reporting procedures shall:

a. Notify the Navy Crane Center (Code 07) by fax (757-967-3808), phone, or e-mail (nfsh_ncc_accident@navy.mil) as soon as practical but not later than 24 hours after an accident involving a fatality, in-patient hospitalization, overturned crane, collapsed boom, or any other major damage to the crane, load, or adjacent property.

b. For all other accidents, notify the Navy Crane Center as soon as practical but no later than three working days after the accident.

c. Near Misses and Other Unplanned Occurrences. Near misses and other unplanned occurrences with lessons to be learned that do not fall under the crane and rigging gear accident definitions, shall be reported using figure 1-2 and E-mail (noted above) within 30 days of the occurrence. A near miss is a situation where an accident was avoided by mere chance or where intervention prevented an ongoing sequence of events that would have resulted in an accident.

Figure 1-1

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CRANE AND RIGGING GEAR ACCIDENT REPORT

Accident Category: ☐ Crane Accident ☐ Rigging Gear Accident

From: UIC:	To: Navy Crane Center Bldg 491 NNSY Portsmouth, VA 23709 Fax (757) 967-3808

Activity:			Report No:
Crane No:	Category:	Accident Date:	Time: hrs
Category of Service: ☐ SPS ☐ GPS		Crane Type:	Crane Manufacturer:
Was Crane/Rigging Gear Being Used in SPS? Yes ____ No ____		Was Crane/Rigging Gear Being Used in a Complex Lift/Critical non-crane rigging operation? Yes ____ No ____	
Location:		Weather:	
Crane Capacity:	Hook Capacity:	Weight of Load on Hook:	
Fatality or Permanent Disability? ☐ Yes ☐ No		Material/Property Cost Estimate:	
Reported to NAVSAFECEN? ☐ Yes ☐ No			

Accident Type:

☐ Personal Injury ☐ Overload ☐ Derail ☐ Damaged Rigging Gear
☐ Load Collision ☐ Two Blocked ☐ Dropped Load ☐ Damaged Crane
☐ Crane Collision ☐ Damaged Load ☐ Other Specify _____

Cause of Accident:

☐ Improper Operation ☐ Equipment Failure ☐ Inadequate Visibility
☐ Improper Rigging ☐ Switch Alignment ☐ Inadequate Communication
☐ Track Condition ☐ Procedural Failure ☐ Other Specify _____

Chargeable to:

☐ Crane Walker ☐ Rigger ☐ Operator
☐ Maintenance ☐ Management/Supervision ☐ Other Specify _____

Crane Function:

☐ Travel ☐ Hoist ☐ Rotate ☐ Luffing ☐ Telescoping ☐ Other ☐ N/A

Is this accident indicative of a recurring problem? ☐ Yes ☐ No

If yes, list Accident Report Nos.: _____

ATTACH COMPLETE AND CONCISE SITUATION DESCRIPTION AND CORRECTIVE/PREVENTIVE ACTIONS TAKEN AS ENCLOSURE (1). Include probable cause and contributing factors. Assess damages and define responsibility. For equipment malfunction or failure, include specific description of the component and the resulting effect or problem caused by the malfunction or failure. List immediate and long term corrective/preventive actions assigned and respective codes.

Preparer:	Phone and email	Code	Date

Concurrences:

	Code	Date
	Code	Date
Certifying Official (Crane Accidents Only):	Code	Date

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Figure 1-2

OFFICIAL USE ONLY

CRANE AND RIGGING GEAR NEAR MISS REPORT

Near Miss Category: ☐ Crane Near Miss ☐ Rigging Gear Near Miss

From: UIC:	To: Navy Crane Center Bldg 491 NNSY Portsmouth, VA 23709 Fax (757) 967-3808 nfsh_ncc_accident@navy.mil

Activity:	Report No:

Crane/Equipment No:	Category:	Near Miss Date:	Time: hrs
Category of Service: ☐ SPS ☐ GPS		Crane /Equipment Type:	Crane/Equipment Manufacturer:
Location:		Weather:	
Crane/Equipment Capacity:	Hook Capacity:	Weight of Load on Hook:	

Is this near miss indicative of a recurring problem? ☐ Yes ☐ No

If yes, list report numbers: _____

In the space below, include a brief description of the event and corrective actions taken to prevent recurrence:

Preparer:	Phone and email	Code	Date

WHE LOCKOUT/TAGOUT PROCEDURES AND RECORD SHEET

1. General. Lockout/Tag-Out (LO/TO) is the preferred method of isolating cranes and WHE from energy sources. The LO/TO procedure is to protect against accidental or inadvertent operation when such operation could cause injury to personnel and/or property damage. LO/TO is the best way to ensure WHE cannot be operated when safety deficiencies exist.

2. Definitions

a. Lockout: The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

b. Lockout Devices: A lock, block, or chain that keeps a switch, valve, or lever in the "off" position installed in such a manner as to isolate and render the crane or equipment inoperable. The lockout device shall prevent the unexpected energizing, startup, or release of stored energy.

c. Tag-out: Tag-out is a safety procedure consisting of placing a clearly marked tag on an energy-isolating device of the crane or equipment. Tag-out shall only be utilized to control the energy isolating devices when equipment cannot be locked.

d. Tag: An authorized tag shall always be used with a lockout device. The tag shall state the crane and equipment identification number, the nature of deficiency, the date tagged-out, and the person to contact before removing the tag or operating the tagged equipment and for any questions related to the tag. Only authorized tags shall be used when LO/TO devices are applied.

3. Action

a. WHE Mechanics shall apply LO/TO devices according to established procedures when performing maintenance, servicing, repairing, or making modifications to machinery, equipment or electrical systems, whenever equipment deficiencies that may adversely affect safe operation are noted and when equipment is out of certification.

b. Crane operators shall notify his/her supervisor whenever a crane or equipment deficiency is identified.

4. Procedures

a. Whenever personnel are performing maintenance, servicing, repairing, and/or making modifications to machinery, equipment, or electrical systems, lockout devices shall be applied. Tags shall be used with all lockout devices.

b. Lockout devices shall be placed in such a manner as to isolate and render the machine or equipment inoperable. The lockout device shall prevent the unexpected energizing, start-up, or release of stored energy. Lockout procedures in OPNAVINST 5100.23 series and organizational instructions shall also be followed.

c. Never use another crane inspection team member's lock and never lend yours. This will protect you and your fellow workers. All locks shall be sequentially identified. No duplicates or master keys will be utilized. Two (2) keys will be issued, with one key going to the WHE inspection certification supervisor and the other to the crane inspection team member. A list shall be established as to the assignment of lock(s), to each crane inspection team member. A copy of the list will be submitted to the activity Program Manager.

d. WHE LO/TO sheet will be placed in the equipment history file (EHF) for the duration that the tag is on the crane (sample below). Duplicate sheets should be maintained in a LO/TO Logbook for quick reference covering all LO/TO actions.

(1) Applying LO/TO Devices: When working on any electrical or mechanical equipment or systems which are capable of being operated or energized, the following procedures shall be followed to apply lockout and tag-out devices:

(a) Crane operators shall be notified that a lockout or tag-out system is going to be utilized and the reason therefore.

(b) Prior to beginning work, all sources of energy shall be terminated, locked-out, and checked to ensure that the lockout is, in fact, effective:

(c) Return operating control(s) to "neutral" or "off" position after testing the machine to ensure the lockout is effective.

(d) The lockout tag shall bear the crane and equipment identification number, the nature of deficiency, the date tagged-out, and the person to contact if any questions.

(e) If one or more employees are working on the equipment, each employee shall have his/her own lock and tag in place.

(2) Removing LO/TO Devices: Prior to placing any crane that has been locked-out and tagged back into service, the WHE Inspector shall be contacted to ensure the crane is in full compliance with NAVFAC P-307 requirements for operation.

(a) Locks and tags shall remain on the equipment until the job is finished, after which the employee whose name appears on the tag shall remove it. In the event that a crane inspection team member leaves the job for emergency reasons or is incapacitated, the cognizant supervisor is the only person authorized to remove that employee's tags and lockout. That supervisor shall remove these tags and locks only after a thorough investigation determines that all workers are clear of the equipment, and that no equipment damage will result from this action. Upon returning to work, the crane inspection team member will inquire from the supervisor, the status of the job with his/her LO/TO.

(b) When it becomes necessary for an employee (first employee) to transfer the job to another employee (second employee), the first employee shall brief the second employee of the status of the equipment, remove his/her lock and tag, and ensure the second employee shall control the equipment with his/her lock and tag from this point on. The supervisor(s) shall assume the responsibility in cases where the second employee does not show up for work due to tardiness, illness or emergency. During a change of supervision, the outgoing supervisor will pass on to the incoming supervisor all information regarding the LO/TO status of equipment/machinery. The outgoing supervisor expedites the transfer of locks/tags, and ensures all information has been passed on. NOTE: A log

will be kept of all LO/TO incidents. The log can be in the form of a ledger, with dates, occurrences, supervisor's name, time, and a summary of all action taken.

(c) Under no circumstances shall an employee test or operate the equipment until all tags and locks have been removed.

(d) The crane supervisor shall notify all personnel affected by the LO/TO.

(e) Before energy is restored to the equipment, the authorized employee(s) who installed the lock(s) will make a visual inspection of the equipment work area and where items were removed and ensure that all components are operationally intact, and that all personnel are in the clear.

(f) Only the individual who applied the device shall remove each LO/TO device from each energy-isolating device, with an exception as described in 4d(2)(a).

5. Special LO/TO Considerations. In situations where the energy isolating device is locked/tagged and there is a need for testing or positioning of the equipment, crane inspection team member shall use the following sequence for testing:

a. Clear equipment of tools and materials.

b. Clear personnel.

c. Ensure the equipment status is such that testing or repositioning is safe.

d. Clear the control of locks/tags according to established procedure.

e. Proceed with test, etc.

6. Procedure Involving More Then One Person. If more than one person is required to lockout equipment, each crane inspection team member shall place his/her own personal lock on the energy isolating device(s).

WHE LOCKOUT/TAGOUT RECORD SHEET (Sample)

Date installed	Tag No.	Applied By (print name)	Crane No.	Location	Reason for LO/TO	Corrective action taken	Date/ Time Cleared	Cleared By (print name)

PROCEDURES FOR REPORTING DEFICIENCIES ON CATERGORY 3 CRANES

1. General. Deficiencies of Load Bearing, Load Controlling, or Operational Safety devices render a crane unsafe for use. The crane shall not be returned to service until such deficiencies are either evaluated as satisfactory or corrected and the crane inspector approves the corrective repair. Recertification may be required for Load Bearing, Load Controlling or Operational Safety device deficiencies if a load test is required to prove satisfactory repairs.

2. Definitions

a. Load Bearing Parts and Load Controlling Parts: Those parts which supports or controls WHE as stated in Section 1 of reference (a).

b. Operational Safety Devices and General Safety devices are referenced in Section 1 of reference (a).

3. Action

a. Crane Operator:

(1) The crane operators shall have the responsibility for the pre-use check and safe operation of their assigned cranes and for reporting problems to the crane inspection division.

(2) When a crane operator detects a deficiency he or she shall immediately notify their supervisor of the extent of the problem.

(3) The operator shall note all deficiencies on the ODCL.

b. Work Center Supervisors:

(1) If the supervisor determines the problem to be a Load Bearing, Load Controlling, or Operational Safety device deficiency, he or she shall immediately secure the crane and notify the inspector for action.

(2) If the problem is a minor deficiency, such as a burnt out light bulb in the controller, the supervisor may authorize the crane operator to use the crane but he or she must notify the crane inspector at the earliest possible time. Notification will occur no later than the end of the shift.

PROCEDURES FOR BYPASSING SAFETY DEVICES ON CRANES

1. General. NAVFAC P-307, Section 10 requires that all activities that own or operate cranes with safety devices develop procedures for controlling the bypassing of these devices.

2. Action

a. The work center supervisor shall control use of keys for safety device bypassing. Keys shall be removed from the crane where practical. Where this is not practical or where safety devices may be bypassed by other means, permission for bypassing/defeating safety devices (except for performance of the operator's pre-operation check) shall be obtained from the operator supervisor.

b. The work center supervisor will remove the safety bypass key from all cranes that do not require a key to lower the boom into the boom rest for traveling. On cranes that need to have the key left in it, a sign shall be in view of the crane operators informing them that the bypass key will only be used for securing the boom into the boom rest.

c. If the safety device has to be bypassed for any other reason other than the pre-operational check, permission must be obtained from the work center supervisor.

d. If the crane is in the shop for maintenance, the maintenance supervisor will have the responsibility for bypassing of the safety devices.

OPERATING PROCEDURES FOR CRANE LIFTS OF UNDETERMINED WEIGHT AND COMPLEX LIFTS

1. General. These safe operating procedures are for personnel involved in crane lifts that are deemed "complex lifts". They are intended to promote crane safety, teamwork, and team responsibility for making final decisions by consensus before crane lifts are started.

2. Definitions

a. Complex Lift: Are defined in Section 10 of reference (a).

b. Estimated Load: Any load, which the actual weight cannot be confirmed by; shipping documents (as may be attached to a shipping container) stenciled weight (if marked "shipping weight" or "curb weight"). Estimated weight shall be identified IAW Section 10 of reference (a).

3. Procedures

a. Prior to making a complex lift, a complex lift plan shall be prepared by the crane operator with the assistance of the rigger/riggers (the lift supervisor will participate if available). The plan shall be documented (Figure 5-1) and a copy provided to the work center supervisor. The plan shall be reviewed and signed by all personnel involved prior to the lift. A rigging supervisor, operations supervisor, or a work leader (classified as WL) shall review on-site conditions for complex lifts and shall perform a pre-job briefing before each complex lift to ensure all crane team personnel understand the required procedures for the lift. A rigging supervisor, operator supervisor or a rigging or crane operator work leader (classified as W/L) shall personally supervise lifts exceeding 80 percent of the certified capacity of the crane's hoist used for the lift. If the lifts are repetitive in nature, the work center supervisor shall be present during the first evolution of the lift with each rigging crew. Subsequent identical lifts by the same crew may be done under the guidance of the rigger-in-charge.

b. Additional directions are stated in Section 10 of reference (a).

c. Load Limits on Piers and Wharf areas: All crane operators shall have their own copies of all applicable parts of engineering studies which imposed load limitations on pier and wharf areas. The load limit information packages shall contain detailed information as would be necessary to determine a cranes safe lifting capacity and proper crane set-ups.

d. Operators Manuals: Every crane shall have a copy of the operating manual developed by the manufacturer for the specific make and model of the crane and a copy of the operating manual for any crane operator aids with which the crane is equipped.

4. Complex Personnel Lift

a. All complex personnel lifts shall be made IAW Section 10 of reference (a). This is a complex lift as defined above. The written procedures shall conform with figure 5-2.

b. Cranes, rigging gear, and personnel platform shall conform to OSHA (29CFR1926.550g) requirements.

c. A body harness and shock absorbing lanyard shall be worn and attached to the lower load block or to a structural member within the personnel platform capable of supporting the impact from a fall. The harness and the anchorage system shall conform to OSHA requirements.

Figure 5-1

COMPLEX LIFT PLAN CHECKLIST	
Per reference:	(a) NAVFAC P-307 Management of Weight Handling Equipment, Dec 09 (b) COMNAVREGHIINST 11260.1B

1. Definition. Complex lifts are those lifts with a moderate to high level of risk involving:

a. Hazardous volatile substances, etc. This does not include materials such as oxygen, acetylene, propane, or gasoline in bottles, cans or tanks that are properly secured in racks or stands designed for lifting and transporting by crane.

b. Large and complex geometric shapes.

c. Lifts of personnel (use enclosure (5), Figure 3-2, Complex Lift Plan Checklist For Personnel Handling).

d. Lifts exceeding 80% of the capacity of the crane hoist (e.g.; main hoist, whip hoist) planned for use. For variable rated cranes, this shall be at the maximum anticipated radius planned for use (Lifts with jib cranes, pillar jib cranes, fixed overhead hoists, and monorails are excluded. Lifts of test weights during maintenance when directed by a qualified load test director are excluded).

NOTE: For all lifts exceeding 80% of the capacity of the crane, a rigger supervisor, operator supervisor, or working leader shall be present.

e. Lifts of submerged or partially submerged objects. The following lifts are not considered complex: Removal of valves, rotors, pipes, etc., from dip tanks for cleaning or coating purposes. Lifting boats of known weight from the water if the boats are of open design with bilge compartments accessible for visual inspection; the boats have label plates indicating weights; and the boats have pre-determined lifting points established by the Owners Equipment Manual (OEM) or the activity engineering organization. Lifting submerged or partially submerged objects that meet the following criteria: the object is verified to not contain fluid

in pockets and/or voids that is unaccounted for in the weight of the object; the object is verified or known to not be stuck by suction or adhesion by corrosion, marine growth, excessive surface tension, mud, etc.; and the object is verified to be clear of obstructions such as other objects in the water, underwater cables, etc.

f. Multiple cranes or multiple hooks lifts on the same crane, except for bridge or gantry cranes with hooks coupled together and specifically designed for simultaneous lifting such as jet engine test stand lifting cranes.

NOTE: FOR ALL MULTIPLE CRANE LIFTS OVER 50% OF CRANE'S CAPACITY SHALL HAVE A CRANE OPERATOR SUPERVISOR ON SITE. MULTIPLE CRANE LIFTS OVER 75% OF CRANE'S CAPACITY WILL BE REVIEWED BY A CRANE OPERATOR SUPERVISOR AND APPROVED ON A CASE-BY-CASE BASIS.

g. Lifts of unusually expensive or one-of-a-kind equipment or components.

h. Lifts of constrained or potentially constrained loads (binding condition).

i. Other lifts involving non-routine operations, difficult operations, and sensitive equipment, or unusual safety risks.

2. Circle the type of complex lift (paragraphs 1.a through 1.d above and complete the following information:

a. Crane USN _____

b. What type of communication is being used to signal the crane operator; i.e., hand signals, radio, etc.?

_____

c. Provide a complete description of rigging equipment involved and object to be lifted.

_____

_____

_____

_____

d. Hook to be used (check all that apply):

MAIN _____ AUX _____

e. WEIGHT OF OBJECT: _____

Method used to determine estimated weight.

_____

f. Estimated height, width and length of object.

_____

g. Total weight of all rigging gear.

_____

h. Total combined weight of load to be lifted, including rigging gear.

_____

i. Crane configuration:

(1) Number of parts of wire _____

(2) Boom length _____

(3) Boom angle _____

(4) Outriggers fully extended Yes_____ No _____

j. Crane deduction (as identified on the crane's weight reductions for load handling devices or load chart).

(1) Main_____

(2) Aux_____

(3) Aux Boom Head_____

(4) Boom Extension/Jib_____

(5) Misc._____

k. Total weight of load to be lifted, including rigging gear, object, and all crane deductions:

_____

l. Planned Radius _____

m. Working Load Limit of crane at planned radius.
_____

n. Maximum operating radius allowed.
_____

o. Page of load chart used to determine capacity (if applicable) _____

p. Crane certified (tested) capacity.
_____

q. Weather condition; i.e., cloudy, rain, lighting, etc.
_____

r. Ground support; i.e., asphalt, concrete, gravel, etc.
_____

s. Does this lift require dunnage under outriggers?
Yes___ No ___

t. If yes, has dunnage been provided?
Yes ___ No ___

u. Is the crane configuration identified above sufficient to perform the lift?
Yes ___ No ___

NOTE: ALL CRANE CAPACITIES WILL BE BASED ON 360-DEGREE LOAD CHART.

3. Identify all special conditions that the crane team should be aware of when performing the lift.

_____
_____
_____
_____
_____

4. **Crane Operator**. The crane operator has reviewed the complex lift plan and concurs with the completed information and confirms that all documented information is accurate and complete.

(Print Name) (Sign Name) Date

5. **Rigger-in-Charge (RIC)**. The RIC has reviewed the complex lift plan and concurs with the completed information and confirms that all documented information is accurate and complete.

(Print Name) (Sign Name) Date

6. Name of other team members involved in the lifts.

a. _____

b. _____

c. _____

d. _____

e. _____

7. **Crane Operator Supervisor or Designated Work Leader**. The crane operator supervisor or designated work leader on site has reviewed the complex lift plan in it's entirety and concurs with the completed information and confirms that all documented information is accurate and complete.

(Print Name) (Sign Name) Date

8. All personnel involved with complex lift are wearing the proper personnel protective equipment (PPE).

Yes____ No ____

9. Pre-Lift Briefing was performed by (Check one and sign below):

___ Crane Operator _____

___ Rigger-in-Charge _____

___ Designated Work Leader _____

___ Crane Operator Supervisor _____

10. Remarks/Feedback/ Lessons learned from this lift.

_____

_____

_____

_____

Figure 5-2

COMPLEX LIFT PLAN CHECKLIST FOR PERSONNEL HANDLING

Per reference: (a) NAVFAC P-307 Management of Weight Handling Equipment, Dec 09
(b) COMNAVREGHIINST 11260.1B

1. Complete the following information:

a. Crane USN _____

b. What type of communication is being used to signal the crane operator; i.e., hand signals, radio, etc.?_____

c. Hook to be used MAIN _____ AUX _____

d. Crane configuration:

(1) Number of parts of Wire _____

(2) Boom length _____

(3) Boom angle _____

(4) Outriggers fully extended. Yes _____ No _____

e. Weather condition; i.e., cloudy, rain, lighting, etc.
_____

f. Ground support; i.e., asphalt, concrete, gravel, etc.
_____

g. Does this lift require dunnage under outriggers?
Yes _____ No _____

h. If yes has dunnage been provided? Yes _____ No _____

ALL CRANE CAPACITIES WILL BE BASED ON 360 LOAD CHART

i. Crane deduction (as identified on the crane's weight reductions for load handling devices and/or load chart).

(1) Main _____

(2) Aux _____

(3) Aux Boom Head _____

(4) Boom Extension/Jib (if applicable) _____

(5) Misc. _____

i total _____

j. Trial Lift/Proof Test.

(1) Weight of personnel basket: **(j)** _____
(with test weight)

TOTAL WEIGHT OF LOAD TO BE LIFTED

(Crane Deductions) i total _____

(Below the hook weight/trial lift) j total _____

Total Weight of i and j: (*Net Wt) _____

k. **Weight of basket, personnel, materials and tools.**

(1) Weight of personnel basket (without test weight):
_____

(2) Personnel weight: _____

(3) Weight of equipment, materials and tools. _____

Total Wt. (k) _____

(Total weight above (k) shall not exceed personnel basket weight with test weight, j.)

l. Planned Radius _____

m. *Rated capacity of crane at planned radius.

_____

n. Page of load chart used to determine rated capacity (if applicable). _____

o. Crane certified (tested) capacity.
Main _____ Aux_____

p. After calculation of ***net wt (i and j)** and ***rated capacity of crane at planned radius (m)**. Is the entire crane configuration identified above sufficient to perform the lift at 50% or less of crane's hoist rated capacity at maximum trial lift radius.

Yes ____ No ____

q. Are all personnel's involved wearing proper protective equipment (PPE)?

Yes ____ No ____

2. **Crane Operator**. The crane operator has reviewed the complex lift plan and concurs with the completed information and confirms that all documented information is accurate and complete.

_____ _____
(Print Name) (Sign Name) Date

3. **RIC**. The RIC has reviewed the complex lift plan and concurs with the completed information and confirms that all documented information is accurate and complete.

_____ _____
(Print Name) (Sign Name) Date

4. Name of other team members involved in the lifts.

a. _____

b. _____

c. _____

d. _____

5. Crane Operator Supervisor or Work Leader. The crane operator supervisor or work leader on site has reviewed the complex lift plan in its entirety and concurs with the completed information and confirms that all documented information is accurate and complete.

_____ _____ _____
(Print Name) (Sign Name) Date

6. Pre-Lift Briefing was performed by (Check one and sign below):

___ Crane Operator
_____

___ Rigger-in-Charge
_____

___ Work Leader
_____

___ Crane Operator Supervisor
_____

7. Remarks/Feedback/Lesson learned from this lift.

_____

_____

_____

_____

_____

_____

PROCEDURES FOR ADVERSE OPERATING CONDITIONS

1. General: Crane operators and riggers must follow strict guidelines in determining reduced capacities and other operational restrictions while operating mobile cranes under adverse conditions as required by Section 10 of reference (a).

2. Discussion: The following procedures and requirements will not only assist the operators and riggers; it will satisfy the requirements of Section 10 of reference (a).

3. Definition: Adverse Operating Conditions- An adverse operating condition may result from climatic conditions (snow, ice, wind, rain and lightning); inadequate support conditions (loose soil, outrigger/stabilizer bearing on manhole, etc.); congestion or obstructions; improper or unusual rigging procedures; or any other situation which the crane operator feels could result in uncontrolled movement or otherwise render the operation unsafe.

4. Procedures

a. When a crane operator observes an adverse operating condition, he/she will suspend operations and notify the work center supervisor for resolution.

b. Specified wind speeds for reduced allowable loads and for curtailing operations shall be based on control of the load and OEM recommendations for stability of the equipment during high winds.

c. Crane operators will reduce crane capacities by 50% whenever operating in sustained winds in excess of 20 mph. For wind speeds in excess of 30 mph cease all crane operations, lower and retract boom. Activities shall have adequate means of monitoring local weather conditions.

d. Making a lift during an adverse condition may result in a complex lift. For such lifts, enclosure (5) must be followed and a complex lift plan completed.

e. Securing of WHE during Adverse Weather Conditions. When severe adverse weather conditions (wind, rain, lightning, etc.) have the potential to develop, actions shall be taken to

preclude damage to WHE. Securing of equipment shall be based on OEM recommendations and local technical instructions. For all outdoor rail mounted crane, activities shall determine the wind forces that will cause the crane to move with the brakes set, and ensure the crane is adequately secured against movement from anticipated wind forces. Materials required to secure WHE, should be identified and readily available.

CONTRACTOR CRANE SUPPORT

1. General. This enclosure relates NAVFAC P-307 requirements for use of contractor owned cranes or contractor operated cranes and contractor multi-purpose machines, material handling equipment (forklifts), and construction equipment when used as cranes to lift suspended loads and rigging equipment in weight handling operations on Navy property. Activity (i.e., host activity) Commanding Officer shall promulgate the following minimum requirements to tenants and Contracting Officers for inclusion in contracts, statements of work, purchase orders, etc.

2. All rented or leased cranes operated by Navy and Base Operating Support (BOS) operating services employees and cranes owned/operated by BOS contractor employees shall comply with Section 1 of reference (a). Crane operations shall be conducted in accordance with Sections 9 through 12 of reference (a).

3. All contractor operated cranes shall comply with Section 1 of reference (a).

4. Contracting Officer Responsibilities: Shall comply with Section 1 of reference (a).

5. The following activities can provide contractor compliance oversight inspections on a reimbursable basis:

FEC Hawaii, Code OPC723, (phone) 471-3366 or (FAX) 474-0153

Navy Crane Center (PHNSY Office), Code 09W7, (phone) 471-2106 or (FAX) 471-2104

Figure 4-1

APPENDIX P – CONTRACTOR CRANE (OR ALTERNATE MACHINE USED TO LIFT SUSPENDED LOAD) AND RIGGING GEAR REQUIREMENTS

CERTIFICATE OF COMPLIANCE	
This certificate shall be signed by an official of the company that provides cranes (or multi-purpose machines, material handling equipment, or construction equipment used to lift loads suspended by rigging gear) or rigging gear for any application under this contract. Post a completed certificate on each crane or alternate machine (or in the contractor's on-site office for rigging operations) brought onto Navy property.	
CONTRACTING OFFICER'S POINT OF CONTACT(Government Representative)	**PHONE**
PRIME CONTRACTOR/PHONE	**CONTRACT NUMBER**
CRANE OR ALTERNATE MACHINE SUPPLIER/PHONE (if different from prime contractor)	**CRANE OR ALTERNATE MACHINE NUMBER** (i.e., ID number)
CRANE OR ALTERNATE MACHINE MANUFACTURER/TYPE/CAPACITY	
CRANE OR ALTERNATE MACHINE OPERATOR'S NAME(S)	
I certify that 1. The above noted crane or alternate machine and all rigging gear conform to applicable OSHA regulations (host country regulations for naval activities in foreign countries) and applicable ASME B30 standards. The following OSHA regulations and ASME standards apply:_____ 2. The operators noted above have been trained and are qualified for the operation of the above noted crane(s) or alternate machine(s). 3. The operators noted above have been trained not to bypass safety devices during lifting operations. 4. The operators, riggers and company officials are aware of the actions required in the event of an accident as specified in the contract.	
COMPANY OFFICIAL SIGNATURE	**DATE**
COMPANY OFFICIAL NAME/TITLE	
POST ON CRANE (ALTERNATE MACHINE, CAB, VEHICLE or in contractor's on-site office for rigging operations)	

Figure 4-2

CONTRACTOR CRANE OR RIGGING OPERATION CHECKLIST

		YES	NO
1	Is the Certificate of Compliance, P-1, in the operator's cab (or in the contractor's on-site office for rigging operations) with the current operator's name listed?		
2	Is the crane/machine transited to and from the job site correctly? Are the OEM instructions for travel being followed?		
3	Does the operator know the weight of the load to be lifted?		
3.1	Is the load to be lifted within the crane/machine manufacturer's rated capacity in its present configuration?		
4	Are outriggers or stabilizers required?		
5	If outriggers are required, are outriggers fully extended and down, and the crane load off the wheels?		
6	Is the crane/machine level and on firm ground, if the ground is not firm is the crane/machine blocked?		
7	If blocking is required, is the entire surface of the outrigger pad supported and is the blocking material of sufficient strength to safely support the loaded outrigger pad?		
8	If outriggers are not used, is the crane/machine rated for on-rubber lifts by the manufacturer's load chart? If stabilizers are used and not outriggers and the wheels are not off the ground is this the correct setup in accordance with the OEM?		
9	Is the swing radius of the crane counterweight clear of people and obstructions and accessible areas within the swing area barricaded to prevent injury or damage?		
10	Has the hook been centered over the load in such a manner to minimize swing?		
11	Is the load well secured and balanced in the sling or lifting device before it is lifted more than a few inches?		
12	Is the lift and swing path clear of obstructions?		
13	If rotation of the load being lifted is hazardous, is a tag or restraint line being used?		
14	Are personnel prevented from standing or passing under a suspended load?		
15	Is the operator's attention diverted?		
16	Are proper signals being used at all times? Is the operator responding properly to the signals? Are radios used for blind lifts?		
17	Is the load lifted a few inches to ensure it is secure and balanced?		
18	Are empty hooks lashed or otherwise secured during travel to prevent swinging?		
19	Does the operator remain at the controls while the load is suspended?		
20	Do the operations ensure that side loading is prohibited?		
21	Are personnel prevented from riding on a load?		
22	Are start and stop motions in a smooth fluid motion (no sudden acceleration or deceleration)?		
23	If operating near electric power lines, are the rules and guidelines understood and adhered to?		
24	Is the lift a critical lift?		
25	If so, are all regulations understood and check-off sheets initialed and signed off?		
25.1	Are any overhead power lines in the vicinity?		
25.2	If so, are complex lift rules and 1926.550(a)(15) being followed?		

Figure 4-2

26	If pick and carry operations are allowed and performed, are OEM directions followed (e.g. rotation lock engaged, boom centered over front or rear, etc.)?		
27	When the crane/machine is left unattended, is it in a safe condition?		
28	Is rigging gear undamaged and acceptable for the application?		
29	Does rigging gear meet applicable ASME or host country standards (e.g. ASME B30.9 for slings, B30.10 for hooks, B30.26 for hardware such as shackles, safety hoist rings, eyebolts, etc, B30.20 for below the hook lifting devices, etc.)?		
30	Is the rigging gear inspected prior to use?		
31	Is chafing gear used to protect slings (especially synthetic slings) and equipment from damage due to sharp corners and edges?		
32	Is the rigging gear used in accordance with its working load limit? Is the load limit visible?		
33	Are positive latching devices used on crane and rigging hooks, or are the hooks "moused"?		
Contractor:		Subcontractor:	
Location:			Date:
Notes:			
Signature of Contracting Officer's Representative:			